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FEELING AND EMOTION

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The material discussed in this paper has appeared since the last abstract on the topic was published in the BULLETIN for November, 1925. It covers the year 1926, nearly all of 1925, and 1927 up to July. In subject matter its scope excludes tests of emotion and temperament, as these are the province of another reviewer; also, for the same reason, it excludes publications on the galvanometric method.

Pleasantness-Unpleasantness.

(1) Theories as to their nature. The ruling tendency in the literature of this period is what McDougall (**38**) calls the "hormic" theory of pleasure, that is, the theory that pleasure involves active striving, or what the English psychologists term a conative tendency. Bartlett (**2**), for example, relates unpleasantness to the conflict of tendencies. A tendency arouses unpleasantness not by being wholly inhibited but by being obstructed, either because an antagonistic response is under way, or because the stimulating situation is not clearly perceived, or because further responses are needed to make it successful. The implication of this doctrine is that complete inhibition would cause the disappearance of affect. Similarly, a tendency is not pleasant merely because it is facilitated, for facilitation drops it to the habit level; it is pleasant when it is progressively satisfied. The reviewer is reminded of her own theory that consciousness accompanies a certain ratio of excitation to inhibition. Much the same conception of the relation of pleasure and unpleasure appears in Bousfield's (**4**) little book. For specific tendencies he substitutes *tension*. All stimuli produce tension, and moreover the

organism is always in a state of normal, hence unconscious, tension. Pleasure is proportionate to the rate of fall of tension; this is Bousfield's formulation of the phenomenon described by Bartlett as the progressive satisfaction of a tendency. Tension seems to be a diffuse process, and in this connection we may note Miller's (**42**) observation that general muscular relaxation greatly lessens the unpleasantness of sudden loud noises. Everyone who has succeeded in relaxing under the dentist's ministrations knows how much more bearable the pain becomes.

The conative, tendency, or tension theory of pleasure must answer two questions: first, why we enjoy active pleasures, for instance, why we deliberately seek athletic contests; and secondly, why we enjoy pleasures that seem to be preceded by no tension whatever, as for example, when we get pleasure from colors or perfumes. Bousfield suggests that we enjoy not only actual fall of tension, but anticipated fall (forepleasure); hence we enter on strenuous enterprises because imagination gives us a foretaste of the lapse of tension that will accompany success. He quotes from personal observation a neurotic case where the patient had the habit of postponing actual lapses of tension in order to enjoy the forepleasure.

As for the pleasures that seem to have no relation to tension or to an active tendency, McDougall urges that they really have: a sweet taste is pleasant only if we are hungry; pain is pleasant if endured in a cause earnestly striven for; pleasant colors facilitate perceptive activity; pure tones promote ready discrimination of the tone from its background. Bousfield, on the other hand, relates them to the lowering not of a conscious tension but of the normal unconscious tension that is always present.

Cellerier (**9**) and Pradines (**49**) are French adherents to the lapse of tension theory, substituting the term need (*besoin*) for tendency, tension, or conation. Primary pleasure, Cellerier says, occurs during the passage from a state of pain, resulting from a primary need, to one of indifference; "the only internal accompaniment of pleasure is relief." The more acute the need and the more rapid the relief, the greater the pleasure; here again we have the fact recognized that it is not relief but relieving that causes pleasure. Pradines joins issue with Cellerier on the relation of pain to need. Pain, he insists, is a sensation and therefore localized; a need does not involve pain; in fact, it has nothing to do with pain. A need is felt through the whole organism, and is a conscious impulsion towards

an external objective. There are only two needs, nutrition and reproduction. Unpleasantness, as distinguished from pain, results (1) from the reversing of a need (disgust), (2) from the nonsatisfaction of a need, (3) from the removal of the object of a need. Pains may accompany, for example, the nonsatisfaction of hunger, but they are only incidental, as it were. This doctrine would seem to involve logically the conclusion that pains are not unpleasant.

When certain pleasant or unpleasant states do not fit one's theory, the difficulty may be dodged by calling them pseudopleasures or pseudopains. Cellerier distinguishes between primary and secondary pleasures and pains. Primary pleasures, that is, those of relief, are always pleasant; if a stimulus is not always pleasant (in this connection he quotes experiments showing individual variations, *e.g.*, in the enjoyment of colors), then the pleasure is derived, not primary. Pradines says that the pleasure of removing pain is a pseudopleasure; it is only momentary; many so-called needs are only pains, for instance the "need" of movement, which arises from the pain of a cramped position, or the need of rest, which arises from fatigue pains. Apparently the need of avoiding pain is a pseudo-need!

Szymanski (**64**) discusses the relation of pleasantness-unpleasantness to activity on the basis of clinical studies of affective disorders. He finds that the abnormal pleasant or euphoric states are accompanied by either the consciousness of unchecked powers or the consciousness of enriched powers, while the unpleasant, depressed states are connected with the sense of either total impotence, or insufficient power, or externally blocked power. This would seem to imply a correspondence between heightened activity and pleasure, lowered activity and unpleasantness, a relation that could be explained on the tension theory by supposing that the tension is greater when the activity is lowered, but as we shall see, the matter is not so simple. There are, according to Szymanski, two types of drives, not those of reproduction and nutrition, but drives due to privation and drives due to fullness. The drives due to privation are felt as unpleasure that must be removed; those due to fullness as pleasure that must seek more and more expression. Szymanski feels the difficulty presented by the simpler sense-pleasures, and tries to meet it by putting them in a separate class, distinguishing between "feeling attitudes" and "feeling signs." The pleasures and unpleasures described above, which involve the consciousness of heightened or lowered capacities, are feeling attitudes, derived from the subject himself. Feeling signs

are the sense-pleasures and unpleasures, deriving their characteristics from the properties of the sensations that arouse them. This sharp distinction complicates the relation of pleasantness and unpleasantness to activity in the following way: heightened activity is found in the feeling attitudes resulting from unchecked and enriched powers, which are pleasant, and in the feeling attitude (anger) resulting from blocked powers, which is unpleasant; also in unpleasant sense-feeling. Lowered activity is found in the feeling attitude of insufficient power (anxiety), which is unpleasant, but also in sense-pleasure. Finally, total absence of activity is involved in grief, which is certainly unpleasant. The discussion leaves the relation of P-U to activity in a chaotic condition.

Winkler-Hermaden (77) contributes little to clear up the difficulty. His paper is based on Bühler's[1] distinction between the pleasure of satisfaction, at the end of activity, the pleasure of function, during activity, and the pleasure of creation, which precedes activity. W. H. would add the pleasure of work and ideal pleasure, but does not succeed in clearly defining them.

The tension theory of P-U harmonizes well with H. T. Moore's[2] theory of esthetic pleasure, that the pleasurable is that which is difficult, but not too difficult, to synthesize. This view, which is practically identical with Puffer's[3] doctrine that the beautiful involves the maximum of stimulation and the maximum of repose, is upheld by Weber (70), and supported by some ingenious experiments. According to the theory, two factors enter into esthetic pleasure, the complexity of the stimulus and the perceptive power of the observer. Two groups of 62 and 43 young women college students respectively compared the pleasantness of figures of varying degrees of complexity. Their perceptive powers were tested by the Heilbronner cards, and correlations of +.39 and +.41 were found between the degree of complexity of the figures an observer preferred and her success in completing the Heilbronner designs. The experimenter, by the way, overestimates his evidence for a positive relation between complexity preference and college grades: an index of .18 does not indicate even a slight relationship.

(2) The objectification and localization of P-U. One of the advantages of the esthetic theory just described is, according to

[1] *Die geistige Entwicklung des Kindes*, 3te Aufl., Jena, 1922, 451–463.
[2] *Psych. Mon.*, 1914, 17, No. 3. *Pain and Pleasure*, New York, 1917.
[3] *The Psychology of Beauty*. Boston, 1905.

Weber, that it allows us to say that beauty is in the object. The most interesting results of Whelan's (76) elaborate introspective study concern the tendency to refer pleasantness or unpleasantness to the object or the subject. He used 117 stimuli, distributed among the modalities of hearing, smell, taste, touch-kinesthesis, and vision; in one series the stimuli were presented singly and the observers dictated descriptions of their experience; in a second series the stimuli were presented in pairs and their feeling effects compared. Whelan found that the intenser feelings were always subjectively referred, that feelings involving kinesthesis were always subjective, and that only subjective feelings could be compared with each other. His conclusion was that feelings are objective when the rest of the experience is objective, and subjective when the rest of the experience is subjective, that is, connected with the body, or with memory ideas. Young (79) ascribes Wohlgemuth's[4] finding that certain observers localize pleasantness and unpleasantness to "the common tendency to refer feeling to some object as its cause," which he regards as a flaw in introspective technique; Wohlgemuth (78) rejoins that Young's failure to get evidence of the localization of P-U is a result of the Cornell laboratory atmosphere.

Pradines, as we have seen, draws a sharp distinction between pleasantness-unpleasantness, which as related to need, a "cellular" condition affecting the whole organism, are unlocalized, and pain, which is always referred to a definite point in space; while Szymanski's "feeling attitudes" are subjective and unlocalized, his "feeling signs" objective and localized. For Pradines, it would appear, pleasure can never be localized.

(3) Mixed P. and U. Wohlgemuth in his monograph reports instances where the simultaneous presence of pleasantness and unpleasantness was experienced. Young (79) explains this result, like that of the localization of feeling, as due to the wrong introspective attitude, namely, the objective attitude, characterized by reference to an object, tendency to localize feeling in the object, and tendency to compare objects in terms of P-U, instead of comparing P-U's themselves. Szymanski (64) holds that mixed feeling attitudes cannot occur, but that mixed feeling signs can, when a pleasant sensation for instance is accompanied by an unpleasant memory; this position seems to be identical with the view that objective feelings of opposite sign can coexist, while subjective ones cannot.

[4] *Brit. J. Psych., Monr. Supp.*, **2**, 1919, No. 6.

(4) Effect of laboratory attitude on introspection. This influence, to which as we have seen Wohlgemuth (**78**) ascribes Young's results, is demonstrated by Young (**80**) himself in a study entitled "The Trained Observer in Affective Psychology." He repeated the experiment in which Nafe[5] obtained the result that pleasantness is "bright pressure," using one of Nafe's observers, and also a behaviorist and a psychologically unsophisticated individual. The behaviorist's results harmonized with his own doctrine, and the unsophisticated individual agreed neither with Nafe's conclusion nor with the behaviorist's. "Everything," says Young, "depends on how the trick animal is trained."

(5) Effects of P-U. (a) On striped muscle processes. Burtt and Tuttle (**7**), using the knee-jerk apparatus described by Tuttle in *The American Journal of Physiology,* volume 64, tried the effect of a series of 120 stimulus words, containing equal numbers of pleasant, unpleasant, and indifferent words in groups of five (for cumulative influence). They got a depression of the reflex amounting on the average to 16 per cent with the unpleasant words; but before we take this as supporting a depressed energy theory of unpleasantness, we must note that there were slight indications of a depression also for pleasant words. However, it is highly probable that the pleasant words were not very pleasant: it is so hard to make human beings really happy in a psychological laboratory!

Ernst (**18**) observed the effect of bitter taste on dynamographic performance, and found an accession of energy, the latent time being shortened and the height of pull increased.

Remmers and Thompson (**50**) repeated with 84 observers the experiment (which originated with Münsterberg) in Langfeld and Allport's laboratory manual, where the subject draws lines while recalling either a pleasant or an unpleasant experience; they found the "pleasant" lines longer by a statistically valid difference, but suggest that the variations are too great to make the experiment convincing for elementary students.

Whelan (**76**) reports that kinesthesis entered into the feeling effects especially of auditory and taste stimuli, and was practically confined to the unpleasant states, which would thus seem to release more energy. In order to harmonize this result with that of the line-drawing experiment, we should have to assume that the activity

[5] *Am. J. Psych.*, **35**, 1924, 507–544.

produced by unpleasantness is a process of contraction and withdrawal rather than one of expansion.

(b) On "involuntary" processes. Ernst (**18**) found that the effect of bitter taste on the pulse was the reverse of that shown by the dynamograph; the pulse was slowed and diminished, except in cases where the subjects reported feeling "irritation." Fourteen neurotic war veterans were asked by Ziegler and Levine (**81**) to recall unpleasant war experiences, and their basal metabolism during recall was compared with the normal rate. Ten of them showed a rise, two a fall. Some showed an increased rate when they were unaware of any emotion; this is like what happens with the galvanic reflex.

(c) On learning and recall. In Rexroad's (**51**) investigation, two groups of observers had to learn to press various keys in response to various colors in a multiple choice apparatus. The members of one group were punished by electric shocks for wrong reactions. By subdivision, the groups were subjected to various distributions of repetitions, so that the relation of the punishment to the stage of learning was varied. He concludes that punishment has three effects on learning, disruptive, instructive, and incentive. The disruptive effect would of course be due to the general upset produced by the punishment, an effect familiar in animal training when the punishment is too strong: the response to the whole situation becomes unfavorably conditioned. This effect is strongest in the early stages of learning; obviously, since it works against learning. The instructive effect "is not present after a certain stage of practice"; obviously, when learning is completed, one learns no more, so far, at least, as appearances at the time are concerned. The incentive effect appears "in the rapid adoption of a scheme or plan for learning a code" (this process could be discovered only through the subject's introspection and would as a rule be absent in animal learning); also in greater care to avoid errors after the learning is complete. This is an interesting analysis, but its relation to the experimental results is not, to the reviewer at least, clearly expounded.

Gordon (**26**) and Anderson and Bolton (**1**) present studies of the effect of P-U on recall; in both the stimuli were odors, and the material to be recalled consisted of names. Gordon's object was to find whether pleasant or unpleasant smells recalled their names best; the results showed no difference between the two. It was, however,

easier for the observers to recall the name of a bottle that had held an odor than that of an odorless bottle of similar appearance.

Anderson and Bolton tested the recall of the actual names of pleasant, unpleasant, and indifferent smells, and the recall of nonsense names presented with odors; they also measured with a lip key the average reading time for pleasant and unpleasant words: no significant difference between pleasant and unpleasant material appeared either in recall or in recognition, but both were superior to indifferent material. It does not seem to the reviewer that "inhibition of the unpleasant" ought to be expected to show much strength in immediate recall. In recall after considerable intervals there is an accumulation of the inhibitory effect, because the unpleasant event has been so much *less frequently* recalled than the pleasant one during the interval.

It is relevant to note Whelan's finding that his observers recalled memories in connection with pleasant stimuli only. This reminds the reviewer of the fact that in the Vassar laboratory, during a study of the factors producing change in the affective values of colors, the occurrence of associated ideas regularly heightened pleasantness.[6]

Wells (74) compared the reaction time for affective processes with that for cognitive processes. In one experiment pictures of women's faces, differing in attractiveness, were presented to a group of men observers for judgment as to their agreeable quality, and the times compared with those required for various other types of reaction; the affective judgments were made more quickly than those of recognizing the faces. In another series the pictures were compared with a single standard of moderate attractiveness, and introspections were recorded as to how far the processes were affective and how far cognitive: Wells concludes that a truly affective process does not require more than .8 sec. There were two women observers and three men in this experiment; the women judged more quickly, and Wells says this harmonizes with the greater affectivity of women! When will eminent psychologists who know better cease drawing conclusions on sex differences from ludicrously insufficient data?

(6) Relative frequency of occurrence of P-U. Flügel (24) had nine psychologically trained observers make for thirty days records at intervals averaging not more than an hour, of their affective experiences, noting their quality and intensity. In every case there was a predominance of pleasant over unpleasant states, the degree

[6] *Am. J. Psych.*, 22, 1911, 79–582.

varying with the individual. The six most frequently mentioned pleasant states were interest, joy, contentment, pleasant sensations, positive functional feeling, food. The six oftenest mentioned unpleasant states were unpleasant sensations, anxiety and worry, anger and irritation, fatigue, and depression. It may be noted that of sense-feelings, (the "objective feelings" of Whelan and the "feeling-signs" of Szymanski), the unpleasant are decidedly more prominent than the pleasant.

(7) Special sources of P-U. There are two Japanese studies of color preference, one (27) on children and one (43) on adults. Unfortunately the same series of colors was not used in both, that presented to the adults being much longer, but in general the results agree: Japanese adults and children put blue at the top of the list and yellow and orange at the bottom, the children differing from the adults chiefly in liking violet much less. It is amusing to find in the results of both researches the traditional sex difference whereby males prefer blue and females red. In Mercer's (41) comparative study of negro and white color preferences blue stands at the top and yellow at the bottom for both groups.

In Dorcus's (11) experiments on color preference the method of paired comparison was used and special attention was given to the effect on preference of changing the brightness and saturation of the colors. In general the order of preference was not influenced by such changes. But when the colors were presented a second time there were so many reversals of judgment that Dorcus questions whether there is such a thing as color preference.

Farnsworth's (20, 21, 22, 23) work on the pleasantness (or restfulness) of different melodic endings is of interest to general affective theory because it shows the influence of habit. "Ending preferences may be permanently altered by training in hearing a certain ratio symbol as the ending" (21). To account for ending preferences, Farnsworth says that we must assume two principles, the tonic principle (human beings prefer the tonic as a melodic ending), and the habit principle. The reviewer would ask why the tonic principle is not a special case of the habit principle, since nature familiarizes us with the association of a tone and its overtone intervals?

Emotion.

(1) Conditions of production and general nature. MacCurdy's (37) book is based on psychiatric material, especially, of course, manic-depressive cases. Behaviorists will note the emphasis on

subjective experience: "the central mystery of emotions is the affect (the inner feeling)." "Affect is any subjective experience that when examined introspectively is considered to originate in or belong to the subject's individual organism. It may be felt to be either mental or physical, to be stimulated by sense perception, by a thought, or to be causeless. But in no case is it thought to be a quality of the stimulus except in relation to the subject." MacCurdy recognizes the rôle of conflict and inhibition in producing affect, so that the degree of emotional expression is inversely proportional to affect, but instead of emphasizing the rôle of visceral processes in the latter, he holds the Freudian doctrine that co-conscious ideas play the leading part. When a stimulus arouses emotion it does not merely produce conscious ideas and overt behavior, but certain instinctively impelled ideas tend to come into consciousness that are blocked by a pre-existing inhibition. Repression prevents this co-conscious series from entering consciousness, but it manifests itself in two ways, as emotional expression and as affect; that is, objectively and subjectively. "The quality of the affect is determined by the sum total of unconscious complexes that are activated, and may therefore have an infinite variety."

The possible rôle of co-conscious ideas in emotion is emphasized by Stratton (**60, 61**) in discussing the remarkable experience of an aviator friend, who during a tail-spin fall of four thousand feet had at least ten vivid pictures of experiences ranging from childhood to the recent past; that these were co-conscious is concluded from the fact that at the same time the aviator was making various adjustments, some of which involved reasoning, whereby he finally straightened the plane out.

Two French psychiatrists, Pascal and Davesne (**47**), less influenced by Freud than MacCurdy, while not neglecting the rôle of memories, place more emphasis on purely biological processes. They say there are three types of pathogenic emotions: psychic, where there is a predominance of affectively toned memories and a kind of sensibilization or mental anaphylaxis to such memories; motor, where instead of normal expression through striped muscles various tics, etc., appear, which serve the purpose of preventing the emotion from invading the vegetative plane; and glandular. The more the excitation discharges in motor paths the less it goes into vegetative paths. Fear, because of the inhibition of motor expression, is the most pathogenic of emotions; joy, because it has so much motor expres-

sion, is the least. Bridges (5) also calls attention to the fact that inhibition of skeletal response tends to increase glandular and visceral response. The "reconciliation" at which his paper aims is between behavioristic and introspective descriptions of emotion; he proposes recognition of the double-aspect theory, with which the reviewer heartily agrees, but which does not seem popular with behaviorists!

Bartlett (2), who as we have seen regards conflict as the source of emotion, sees two sets of conditions as the causes of conflict, the blocking of response and the blurring of perception. In a motor psychology, of course, these are merely two types of blocked response.

Britan (6) resembles MacCurdy in his emphasis on the rôle of intellectual processes in emotion: pure objects, he points out, are seldom emotional stimuli. The most important part is played by sympathetic stimuli, that is, the perception of emotional excitement in others, and by ideas, especially by language. The central processes connected with these supply the added nervous potential which is involved in the emotional drive. Pages (46) also emphasizes the dependence of emotional on intellectual processes, citing evidence from clinical cases.

The distinction between muscular and vegetative or glandular discharge in emotion appears in Wechsler's theory (73) as the distinction between affective behavior reactions and "choc." Choc involves the internal organs, and is what gives rise to the peculiar psychic state or affect, which MacCurdy ascribes to co-conscious ideas. Affective behavior reactions involve a general orientation of the body to the stimulus. The emphasis on "orientation" here seems a mistake, and Wechsler's illustrations are inconsistent with it. Trembling, for instance, he classes with choc and crying with behavior reactions, but how one orients in crying remains a puzzle.

Over against Wechsler's belief that the organic and not the "behavior reactions" are the basis of the psychic affect, may be set Blatz's (3) observation that his subjects, whose organic reactions during fear of falling were under investigation, called their emotion "fear" only in the first experience, when they tried to escape.

Stieler (59) adopts Malebranche's view of the soul as a substance indivisible and not extended, and maintains that it has a passive function, perception, and an active function, will. Feeling, which has been regarded as a third function, belongs under the active power; we have an emotion when our psychophysical organism takes an attitude towards an object. If this sounds like Malebranche, it sounds

also like McDougall, and the two thinkers perhaps do not greatly differ after all.

(2) Effects of emotion. It is of course impossible to draw a line between emotion and its effects, but under this second heading we shall consider investigations whose primary object has been the observation of effects rather than the construction of theories as to the nature of emotion.

(a) On striped muscles. Stratton (**60, 61**), basing his discussion on the case of the falling aviator, opposes the common view that emotion disorganizes motor coördinations. "Emotion, unless very violent, does not disrupt even complicated muscular acts, except those unsuited to the prevailing impulse"; there is even an excess of motor energy, more movements being performed. This would mean, of course, that Stratton's theory of emotion minimizes the visceral factors, which are inversely proportional to the muscular factors.

Dumas (**12, 13**) in the course of two articles largely historical in character, describes some interesting experiments of his own on facial expression. Following a suggestion from some work of Mosso's on dogs, he applied the faradic current to human subjects, placing one electrode on the back, the other below the lobe of the ear, to reach the facial nerve before it enters the parotid. After many failures, he showed that a slight excitation of the facial nerve at this point produces an expression analogous to that of joy. Mosso with his dogs obtained by increasing the current expressions of various emotions up to anger; Dumas was unable to get anything more than increasingly energetic contraction of the muscles concerned with smiling. In man, he says, anger is a secondary emotion. He calls attention to the facial expressions of persons suffering from nerve disease, as good material.

Sherman's (**56**) work will be taken as an argument against the ultimate differentiation of the types of emotion recognized in language: moving pictures of babies undergoing hunger, fear, anger, or pain were shown to students of psychology, who named from 12 to 25 different emotions as the probable causes of the behavior displayed; for fear, anger, and pain, nurses named 7 emotions and medical students 8.

Skaggs (**57**) compared the effect of sudden very loud noise and the anticipation of it upon the steadiness of hand movements, measured by the Whipple apparatus. The "startledness" resulting from the noise had no unfavorable effect on steadiness, rather the reverse,

but "excited expectancy" had a decidedly unfavorable effect. The "jumping" at the noise seems to involve "a sudden spasmodic contraction of the upper bodily skeletal muscles."

Jacobson (**28**) finds that general muscular tonus has a marked influence on the start and feeling of shock produced by a loud noise, which are "wanting or minimal" when the observer is relaxed. This is confirmed for the effect of electric shocks by Miller (**42**), whose observers had a long preliminary training in complete muscular relaxation. They were then given 100 tests in the normal and 100 in the relaxed condition, two finger-tips being immersed in normal salt solution through which a current was occasionally passed: the speed and extent of the withdrawal movement were measured. For six of the seven observers relaxation reduced the extent of the movement and increased the reaction time, besides, as we have seen, reducing the intensity and unpleasantness of the stimulus.

Seashore (**55**) outlines a number of highly interesting researches, in progress at his laboratory by his method of phonophotography, on the relation to emotion of *vibrato* in singing and speech.

(b) On "involuntary" processes. Cannon and Britton (**8**) demonstrated the relation of medulliadrenal secretion to the effect of emotion on the heart rate of cats. In animals with denervated hearts, activities such as extending the legs or turning the body increased the rate from 5 to 10 beats per minute; when the adrenal influence was withdrawn by removing one gland and denervating the other, hardly any increase of heart rate accompanied these activities. Emotional excitement produced by a barking dog or by restraint increased the rate by an average of 22 beats; after adrenal inactivation no increase was noted. Great emotional excitement and vigorous struggling produced an average increase of 49 beats; after adrenal inactivation the increase was only 5 beats. The accelerative effect on the heart persisted from 20 to 25 minutes even when the cat was lying quiet. Mora, Amtman, and Hoffman (**45**) report that dogs excited by the neighborhood of a cat or rat showed an increase of from 30 per cent to 150 per cent in the number of leucocytes over that in the resting state. Thirteen human patients had counts taken at intervals during the days before operation and finally when they were on the table: six of them said they were indifferent and seven admitted being frightened. As a feather in the cap of introspection, it may be noted that the latter group showed a leucocyte increase of from 12 per cent to 100 per cent, the former little or no change.

Both dogs and sensitive patients showed a relative increase in polymorphonuclear forms.

It was stated at the outset of this review that work with the galvanic reflex and on tests would not be summarized. Syz's research at Johns Hopkins falls under both heads. But we may note his finding (**63**), apropos of the confirmation mentioned above of introspective results by leucocyte counts, that when his observers were asked after the test to mark all words that had produced emotion, the words oftenest marked were not at all those which had produced the strongest galvanic deflection. Syz suggests that social inhibitions prevent acknowledgment of the emotion in many cases; for example, "kiss" was marked oftener than any other word with a sex significance, and it was the mildest and most "harmless" of this class of words. On this principle we could explain the better correspondence noted above between introspection and the blood count; fear before an operation involves no social stigma.

No clear relationship between emotion and metabolic rate appears in the papers we are discussing. Landis (**32**) found a quick rise during anticipation of severe pain and a rapid fall during the pain itself, but the results were not well defined. Totten (**66**) obtained no satisfactory evidence of change in oxygen consumption during the experiences produced by a fairly wide range of emotional stimuli, but plans to continue and extend the investigation. The results for vasomotor and breathing effects are hardly more satisfactory. Landis (**33**) subjected himself and two other heroic observers to a gruelling ordeal, consisting of a fast of about 48 hours and a sleepless period of about 36 hours, with, towards the end of the period, electrical stimulation, as intense and long continued as the subject could bear. The method involved elaborate controls. Records were made of blood pressure, metabolic rate, thoracic and abdominal breathing, rectal and gastric contractions. The electric stimulation caused a very rapid rise of blood pressure with disappearance of the respiration waves usually observable in it, followed by a fall as the stimulation continued. Marked cardiac irregularity occurred at first, also disappearing with continuance of the stimulus. Quickened breathing, "deep gasping thoracic respiration followed by increasing tendency to quick shallow breathing," resulted from the stimulation, which also stopped rectal contractions. It caused stomach contractions in one observer and checked them in another. Landis notes that according to the introspective reports the "affective phenomena

occur before and after the actual period of emotional stress." Now to the reviewer it seems actually reasonable, though literally paradoxical, to deny that the experience of Landis's observers during the application of the stimulus was an emotion at all. In the "voluntary" endurance of extreme pain, which can be terminated whenever one wishes and which contains no element of surprise, there is of course no element of fear either. We find it interesting to bite gently on a sore tooth; if the dentist produced that amount of pain we should protest energetically because we should fear what he might do next. Emotions occur when there is a conflict of tendencies: as McDougall would say, when an experience is in accord with the ruling "hormic" or conative tendency it is not unpleasant.

Landis and Gullette (**34**) found it impossible to distinguish characteristic blood pressure symptoms for different emotions; with the exception of the "choc" of surprise, which gives a sharp rise immediately followed by a fall, there is no correspondence between blood pressure and introspective report. This was with stimuli covering a wide range of emotions. Skaggs (**57**) and Blatz (**3**) seem to have obtained opposite results in regard to the effect of sudden shock. The former produced the shocks by electricity, the latter by tipping back the observer's chair. Both report a characteristic inspiratory movement, but Skaggs says the breathing thereafter is accelerated, Blatz that it is retarded. As regards heart rate the discrepancy is not so marked: Skaggs says it is lowered, Blatz that there is an immediate acceleration, then a marked retardation, followed by a prolonged acceleration and then by a gradual retardation. But it is probably futile to compare the results of workers unless their methods were exactly the same. Skaggs studied the pulse and breathing effects of anticipation of the shock, and found them practically the same as those of experiencing it; Blatz also reports that anticipation of the stimulus produced the same pulse effect as its actual occurrence.

Dumas (**14**), with F. Franck, was able to study the cerebral pulse in four trepanned patients, and to compare the effects of slight shocks from sudden noises upon cerebral and radial pulse. The interesting result was obtained that cerebral and radial pulse varied together: obviously Mosso's theory of independent cerebral vasomotor changes accompanying psychic changes will not hold. "The vasomotor reflexes in the brain are not specifically cerebral, and obey the same

laws as the superficial vasomotor reflexes; in fact those of the hand seem more delicate and 'intelligent' than those of the brain."

Dumas and his associates (**15**) demonstrated an increase in retinal blood pressure under emotion.

(c) On intellectual processes. We have noted the part played by ideas, conscious and co-conscious, in various theories of emotion. Stratton (**60, 61**) maintains that the disorganizing effect of emotion on thought is exerted only by the extreme degrees of excitement; "normally emotion does not break down but breaks up thought." Its cognitive effect is increased rate of change of ideas, lowering of the threshold for ideas, more effective organization of certain ideas.

Cutsforth (**10**) discusses at length the case of a woman with very highly developed visual synesthesias which seem to be fundamentally emotional in content. The paper deals chiefly with the bearing of the phenomenon on the theory of perception.

(3) General "Emotivity." Can individuals be described as generally emotional or generally calm, or do they differ rather in tendencies to particular emotions? This question of course relates directly to problems of individual differences, with which we are not concerned in this review, but it has a bearing on emotional theory since it raises the problem as to whether different emotions have a common factor. Wechsler (**71, 72**) discusses it on the basis of his galvanometric results. Twenty observers were subjected to series of different emotional stimuli, and for each kind of stimulus were ranked in order of the magnitude of their response. If different emotions have common elements, there should be high intercorrelations between these rankings. But in general good correlations held between stimuli that might be considered to produce the same emotion, as for example the sound of a Klaxon horn and the flash of a magnesium light. This evidence for fundamental differences in emotions may be set over against the tendency of Landis and others to obliterate such distinctions. It seems to the reviewer that the cases where specific differences in emotions seem to vanish, as in the fear and rage of Cannon's cats, the cause is the extreme intensity of the disturbance: at their maximum emotions may well lose their identity in a general bodily revolution.

(4) Desire. Dunlap (**16**) has been criticized for substituting "desires" for "instincts," his critics urging that there is no essential difference between the two. In this paper he distinguishes between instinct, as an innate disposition in the nervous system, not intro-

spectively observable, and desire, a condition in non-nervous tissue which by exciting certain receptors becomes introspectively observable. Whether this distinction touches the point at issue in the instinct controversy seems doubtful. Wells (**75**), in an article that is chiefly a review of MacCurdy, calls attention to the significance of the supply of an individual's energy as determining his system of values (which are of course practically the same thing as desires). When a person's energy begins to abate from any cause, he seeks values requiring less energy; this is the significance of the pathological process of regression.

Lund (**36**) obtained high and consistent positive correlations between desires and beliefs by presenting to large groups of college students thirty propositions from the fields of religion, ethics, politics, science, and general life, and requiring each observer to rate each proposition on a scale of twenty degrees of belief and a scale of twenty degrees of desire. Although we are not here concerned with individual differences, the reviewer as a New Yorker cannot help recording a smile at the fact that students from Nebraska had correlations between desire and belief nine points higher than those of the Columbia-Barnard group.

Riddle (**53**), in a unique research, made a long study of the behavior, including respiration, and introspective or rather retrospective reports of a group of persons playing stud poker with real money. The results were obtained by the method of partial correlations, and included data on the influence of the "desire to beat." The most general conclusions are that the desire to beat (as introspectively reported) is not highly correlated with the size of the player's bet, representing the response to desire, but that the bet once made largely determines the total strength of the desire; that is, bet is related to desire more closely as stimulus than as response. Feelings of elation, gloominess, and excitement show moderately high correlation with the desire to beat. There is nothing surprising in these conclusions, but another one arouses skepticism. In the various partial correlations obtaining between desire to beat, size of bet, and third factors, the influence of the bet appeared to be stronger than that of the desire to beat. The author concludes that under these conditions, "desire is predominantly a response to immediate stimulation and is to a less degree a stimulus to further action. This is very interesting in view of the fact that desire has been given such an important place in motivation." The reviewer would in this case hold that the accumu-

lated experience of ordinary life should be trusted in preference to laboratory introspections.

(5) Certain special emotional states. Janet (**29, 30**) discusses in two articles a case of pathological ecstasy, of which the crisis is characterized by complete immobility, due to complete withdrawal of interest from external things, compensated by enormous inner activity, all kinds of inner representations accompanied by intense faith in their reality, and all varieties of joyful sentiments, esthetic, moral, intellectual, and of course sexual.

Moers (**44**) presented to her observers an elaborate questionary on the nature of repentance, its elements, kinds, effects, relation to other processes such as remorse, resolve to improve, moral self-respect, and so forth. The results cannot be summarized, and the method does not bear on problems of interest to American psychologists.

The reader will recall the work of Benussi,[7] Marston,[8] Burtt,[9] and Larson[10] on the influence of the consciousness of deception upon vasomotor and respiratory processes and reaction time. The papers dealing with this subject on our list are largely negative in their conclusions. Landis and Wiley (**35**), duplicating the conditions of two of Burtt's series, could not from the blood pressure records distinguish truth from falsehood in their observers more than 40 per cent of the time. The inspiration-expiration ratio (time of I divided by time of E) was somewhat but not much more reliable.

English (**17**), repeating the first part of Marston's reaction time experiments, finds that of 20 observers, 9 reacted faster when trying to deceive, thus representing Marston's class of good liars, while 7 reacted more slowly, being according to Marston poor liars; but the faster observers were not less variable in their speed than the slower ones, so that Marston's two criteria, speed and variability, were not consistent with each other. Discussion, none too profitable, has gone on concerning the presence and nature of the consciousness of deception. When the deception involves easy tasks, it readily becomes mechanical. Goldstein[11] found that consciousness of deception, when it occurred, always lengthened reaction-time, but that it seldom occurred except when the tasks were harder than those set by Marston; her conclusion

[7] *Arch. f. d. ges. Psych.*, **31**, 1914, 244–273.
[8] *J. Exper. Psych.*, **3**, 1920, 72–88.
[9] *J. Exper. Psych.*, **4**, 1921, 1–23.
[10] *J. Exper. Psych.*, **6**, 1923, 420–453.
[11] *Am. J. Psych.*, **34**, 1923, 562–581.

then was that there are no good conscious liars. To this Marston (**40**) replies that the longer reaction times obtained by Goldstein with harder tasks were due to the increased difficulty. He questions her interpretation of her observers' introspections: she concludes that those whose reactions were shortened in easy tasks were not conscious of deception because they did not report strain, but why, he urges, assume that strain is essential to the deceptive attitude? He reiterates that an emotional attitude resulting in the application of increased energy to the task of deception, and thus in shortened reaction time, may characterize the deceptive attitude in some observers. Rich (**52**), commenting on the controversy, thinks that the distinction between good and poor liars is valueless, for a complication of conditions which leads to conflicting impulses makes all persons react more slowly when deceiving: increased mental work is a component of the deceptive attitude. The issue seems, we may gather, to lie between the idea of increased mental energy, which will speed up performance, and that of increased mental work, which will slacken it.

Fifty-one women students in G. S. Gates's (**25**) investigation recorded for a week their experiences of anger or extreme irritation, noting the time of day, their state of health graded on a scale of 5, the cause, duration, responses, and after-effects. They also rated themselves on a scale of 5 at the outset as regards irritability. The average number of such emotional experiences in one week was 2.85; there was a good correspondence between the number and intensity of anger experiences and the self-rating of an individual's irritability. Anger was more frequent on holidays and before meals, and bodily condition at the occurrence of anger was oftener poor than good. The median duration was from ten to twenty minutes. Thwarted self-assertion was the most frequent cause; the anger was directed oftener at persons than at things, and verbal response was the predominant form.

Marbe's (**39**) paper on homesickness is merely a descriptive essay, presenting no new facts.

(6) Suggestions on technique. Verwoerd (**67**) has ingeniously made use of the Ranschburg apparatus to produce emotions under laboratory conditions, which is of course the hardest task of the experimentalist in this field. Various colors or nonsense syllables in different combinations or series are presented in rapid succession, and the observer is required to perform various types of reaction. Satis-

faction ranging up to delight may be produced by success, disappointment ranging down to shame by failure, as when the observer falls into a rather obvious trap. Fear can be obtained by associating electric shock with failure; "compassion, shame and embarrassment, malicious joy" by requiring the observer to punish the experimenter for his own (O's) mistakes. Anger is aroused when the observer is punished after a correct reaction.

Jarden and Fernberger (**31**), using the Boring-Titchener development of the Wundt-Piderit model of facial expressions, report that its demonstrational value is greatly increased by accompanying suggestion of the emotion represented. Compare Sherman's work with the moving pictures of babies!

(*7*) Conditioning of emotions. Watson's (**68, 69**) two Powell lectures at Clark describe his own experiments and those of Mary Cover Jones; they contain little but what has by this time been published elsewhere.

(8) Emotion and disease. Stratton (**62**) presented to his observers descriptions of about twenty hypothetical "mildly anger-provoking situations," and asked them to record on a scale of 1 to 6 the intensity of their probable reaction; the same procedure was followed for fear. The disease histories of the observers were obtained from the college infirmary. A slight but constant excess of anger intensity was found in those who had a record of disease; no such connection appeared in the case of fear. An estimate of how angry one would probably be made in a mildly anger-provoking situation seems so far removed from an actual manifestation of emotion that one is surprised at the occurrence of any uniformity.

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LUDWIG, EMIL, *William Hohenzollern, the Last of the Kaisers.*
DODD, LEE WILSON, *The Golden Complex, a Defense of Inferiority.*

The application of psychological principles to the interpretation of history has always been attractive and has achieved a new impetus under the direction of the Freudian approach. Freudianism has been referred to as the deep psychology of the most influential human motives, and these extend from the intimate personal, family situation to the grand stage of historical events. Since the Freudian insight is directly in terms of personality, the consequential behavior commonly represented as politics or diplomacy may likewise be portrayed as the operation of the same motives that determine more ordinary careers. The further enlightenment contributed by the Freudian view is that derived from the abnormal. It centers about the mechanism of complexes with their strong emotional drive and their trend to give thought and behavior a distorted perspective, even a delusional status. It would appear that persons entrusted by human arrangements for the government of society with responsible positions should be peculiarly stable as well as competent. For the disaster that a slight measure of psychopathic taint may introduce into public welfare gives communities and nations an interest in the integrity of their mental make-up.

All this is likely to receive attention which otherwise it would fail to command by reason of the account of Wilhelm Hohenzollern by Emil Ludwig, which is substantially a psychobiography. Of the two narratives, the one concerned with situations and conferences and the diplomatic intricacies of European politics, and the other with the personalities in the play and plot, Ludwig stakes the correctness of interpretation largely on the latter. The history of the events which culminated in the catastrophe of the great war find their clue in the personality of the "last of the Kaisers," and in the circumstance that he was in a position to act out on a grand scale the neurotic character-traits which he possessed by nature and were particularly aggravated by his unfortunate upbringing. Other neurotics live their complexes in phantasy or literary creations. The study is a psychoanalysis of a very consequential person and will

be as interesting to psychologists, even when they place in second position of importance the presence of such a personality in high life.

It would be possible for a psychoanalyst to select from this account just those incidents which would make a significant case history in terms of behavior, with no dominant reference to its historical importance. Such a case history of Wilhelm Hohenzollern begins, in Ludwig's view, with the fact that he was born with a birth palsy; and that this withered arm acted as the source of an inferiority complex which in the end was his undoing. By way of compensation he made of himself a competent sportsman, a martial figure on horseback, and an overlord in every relation, thus converting a weakness into strength. It is, however, only the Freudian who belongs to Adler's school who would regard this organ inferiority as of critical importance. The view put forward by Dr. Morton Prince in 1915 on "The Psychology of the Kaiser" made central his general psychoneurotic nature. Dr. Prince was concerned with the Kaiser's delusions, his symptoms in the field of belief, and would interpret his dogma of the divine right of kings as the only available rationalization for a superiority complex which was fundamentally a form of megalomania cultivated in the interests of an exhalted ego-expression. This analysis would imply that while the withered arm may have acted as a constant aggravation and determined those early relations which made his youth one of revolt, this issue would never have been consummated, had it not been grafted on a warped personality that under all circumstances would have been the victim of an ego-assertion so preposterous as to be abnormal. The more literal Freudian disciple would find in the family relation a deep-seated source for the Kaiser's neurosis. It is a fact that his mother had an antipathy for this crippled child who was to carry the destiny of the family, that his behavior made him an object of distrust, that he lacked the family affection which the other more normal children shared, and that his father snubbed him even in the years when he would naturally assume responsibilities. In addition to this constant family turmoil, his own restless extravagance and insistence upon his prerogative, prevented any redemption on the part of friends or advisers. He was naturally surrounded by those who would give him all the adulation that he craved, and so further strengthened an abnormal sense of superiority and destiny, which obstructed a normal attitude towards his fellow men. He

was in many directions a youth in revolt, and regarded as his enemies all persons and forces who took any liberal view of the place of a ruler in the nation. As the army was the only institution which would afford the proper outlet for all these egoistic traits, the dominant pattern of his behavior was that of a soldier. That out of these combined influences of heredity and environment there should develop an abnormal personality is clearly intelligible.

Though the question of his responsibility to rule was raised, there never was a doubt that in every practical sense the Kaiser always was and remains free from any suggestion of insanity. He is merely a neurotic personality developing under special circumstances. The extravagances of his behavior and utterances are the expressions of a desire to feed the exaltation of his ego. He had no hesitation in dictating to architects and artists, to dramatists and thinkers, placing his views above those of experts; nor had he the patience to acquire knowledge or go through disciplinary measures either at home or in the university or in public life. There is a constant theatrical pose, a passion for parades and glitter and circumstance and change of costume, so that at times one wonders whether the real situation was not subordinated to the posed one, making the picture in Freudian language the realization of a phantasy supported by a delusion. In every respect the personal Kaiser seems more significant than the political Kaiser to explain his part in affairs. It is this view that is carried through Ludwig's pages, at times giving way to the diplomatic story, but for the most part presenting the case of William II as a study in a neurotic personality. In such a portrayal the two phases, the one the positive phase of exaltation and the other the opposite negative phase of depression, that is, all that would detract from the positive satisfaction, must be considered. In this respect there was the typical instability and alternation of state of the hysterical. There were phobias as well as manias. He had a marked fear of disease and contagion, he was solicitous about the police patrol of his person and avoided real danger as well as unpopularity, could not bear to read adverse criticisms, showed in his relations to England—his closest family connection—both envy and hatred, and in the end under disaster fled into exile in an unheroic manner. Even in his relaxation there is the same instability, a sort of poltroonery in his playful moods in which he mingled jest with insult and showed a definite lack of consideration for the feelings of others. That such a personality

in a difficult diplomatic situation would precipitate trouble, is precisely what makes it necessary to consider the personal Kaiser above the political one.

The most definite political application is in his violent attitude toward the Social-democrats and the constant sentences for insult to His Majesty. To maintain such a rôle under modern democratic tendency necessarily involved an autocratic rule, which it is amazing that German people would tolerate. But with unlimited power and the sentiment of devotion to the dynasty, such a situation would endure until a revolution took place. The neurosis of the Kaiser precipitated the issue. To the psychologist it is an interesting speculation as to how differently history would have taken its course, if Wilhelm Hohenzollern had been a different kind of man. At all events Ludwig's story must take its place in the annals of psychopathology as well as in those of European history.

It is a fortunate chance that a much slighter tale introduces another phase of the same type of interpretation, and at the same time questions the validity of inferiority as producing a complex. Mr. Dodd comes to the defense of inferiority and centers his case about that of Byron whose club-foot parallels the Kaiser's withered arm. In an engaging way he carries out in a lighter vein a study of Byron's career as definitely aided by the stimulus to overcome his bodily handicap. It became a golden complex. Mr. Dodd would have no difficulty in finding other instances in which, by way of compensation, a handicap proved the making and not the marring of a personality. There is thus added an illustration from literature to complete the one from political life.

Yet there is more than this involved, since Byron was also a definitely neurotic personality; and according to the analysis of Dr. Matthew Woods, his epileptic nature is evidenced by traits which are associated with that deviation from normality. The outlet of his expressions both in the domain of romance, personal and patriotic, certainly find a clue in the peculiar personality of Byron as a man, which pervades and determines his expressions as a poet and a romantic patriot. The overcoming of physical defect in this case also led to the compensation of his becoming a good shot, a competent horseman, and the best swimmer in England. The parallel is interesting in several directions, and gives further question to the correctness of Adler's version of inferiority, not to mention more than incidentally the view of those who are sympathetic with Adler's

position but regard *social* inferiority as far more influential in warping character. As a fact, the normal man escapes complexes through the stability of his make-up, and would accept a physical handicap with resignation, with as much naturalness as possible, and find in his compensating traits the basis of a normal career. Both studies contribute interesting examples of the manner in which the conclusions of psychology find application in history and literature, as they must in all phases of human expression in which the personal factor is significant. As material for psychoanalytic study such biographies form valuable psychological documents.

JOSEPH JASTROW

TAYLOR, W. S., *Readings in Abnormal Psychology and Mental Hygiene*. N. Y.: Appleton, 1926. Pp. xxxiii + 789.

This excellent selection of readings is chosen with wide viewpoint from writings of both psychologists and psychiatrists. The introduction, by Joseph Jastrow, indicates the importance of abnormal psychology in the study of psychology in the present day and analyzes a number of problems that can best approached from the abnormal point of view, although they are of interest and importance for general psychology.

The first several chapters are concerned with limiting the field and with questions of diagnosis and classification. All of the important psychoses are treated. Two short chapters treat of the causes and treatment of nervous and mental diseases with especial emphasis on the functional aspects of the problem.

In the following chapters, special problems are discussed such as adjustmental organization, dissociation, memory, meaning and its significance, symbolism, wishes, sentiments, complexes, conflict and some of its manifestations, mental regression, disturbances of sensation and emotion, functional motor abnormalities (including such topics as speech disorders, the psychology of errors and automatic writing), and the dissociation of personality. A consideration of the subconscious, leads to a discussion of suggestion and hypnotic conditions and so on to illusions, hallucinations and dreams. The final chapters include such topics as the higher processes (of normal individuals) in the light of abnormal psychology, problems of personality and character, general conceptions of functional disorders, psychotherapy and general illustrations. The editor brings all of this together in a concluding chapter on mental hygiene. An excel-

lent bibliography and a very carefully prepared index are included.

This volume should be as important a contribution to the study of abnormal psychology as was Robinson and Robinson's Readings for general psychology. The quotations cover the field very well and are chosen from a great variety of authors, thus assuring a representation of the different 'schools' and wide differences in viewpoint.

SAMUEL W. FERNBERGER

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WOODBRIDGE, RILEY, *From Myth to Reason: The Story of the March of the Mind in the Interpretation of Nature.* N. Y.: Appleton, 1926. Pp. xii + 327.

Man's interpretation of nature may be divided into five periods which the author describes as the age of myth, the age of magic, the age of discovery, the age of mechanics and the age of evolution. The author describes the development of the different systems and especially emphasizes the historical development. S. W. F.

SKINNER, C. E., GAST, I. M., SKINNER, H. C., *Editors, Readings in Educational Psychology.* N. Y.: Appleton, 1926. Pp. ix + 833.

This volume is intended to serve the same function for educational psychology that is already fulfilled in the fields of the history of psychology, general psychology, and abnormal psychology by the compliations of Rand, Robinson and Robinson, and Taylor respectively. The present volume differs from these in the fact that it contains many very short selections. There are 609 selections in the 800 odd pages of the book. These excerpts range in length from a single sentence to several pages.

Possibly the most adequate description of the book may be given by listing the chapter headings under which the editors have organized their material. They are as follows: The Problems and Scope of Educational Psychology; The Components of Behavior; The Physical Basis of Behavior; Heredity and Environment; Intelligence; Individual Differences; Instincts; Emotions, Feelings, and Attitudes; The Learning Process; Habit in Learning; How to Study; Apperception and Perception; Association and Memory; Imagination; Thinking and Teaching to Think; Attention; Interest, and Motivation; Play and the Play Spirit in Education; Deliberation

and Decision; Transfer of Training; Mental Work and Fatigue; Childhood and Adolescence; Mental Hygiene; Interpretations in Psychology; and Statistical Methods for Teachers.

Throughout the volume introductory and explanatory material is inserted. Occasionally the editors have included informational material of their own composition. A series of questions is given at the conclusion of each chapter. Each chapter is also provided with its own bibliography, and these special lists of references are supplemented at the end of the book by a general compilation of the works most frequently used in educational psychology.

Under the somewhat misleading caption of "American Psychological and Educational Periodicals" appears an incomplete list of certain journals in these fields.

A glossary of over one hundred and fifty words, which seem of importance to the editors for the student of educational psychology, is provided. This is the weakest portion of the book. The definitions of the terms offered are many of them incomplete if not positively erroneous. A single example may illustrate this point. A *Feeling* is defined as, "A simple pleasurable or painful side of any simple mental state." To pass over the confusion of the word *painful* with *unpleasant* it is only necessary to point out, in criticism, that is is difficult to see how a simple mental state can have a side of any sort. Moreover, this definition accepts, without qualification, one of the least attractive theories for the relationship between affection and sensation, and at the same time excludes the possibility of using the term in characterizing complex states of any sort.

The volume is provided with what seems to be a complete and adequate index. A good index, moreover, is a most important adjunct to a volume of the sort under consideration.

In general it is difficult to evaluate the compilation under review. Many of the selections seems to the reviewer important merely as examples of what authors should not write and students should not read, but this is obviously a subjective judgement in which many other students of psychology may not agree. It is certain, however, that many of the selections presented have been wrenched loose from an essential context. Indeed, it is difficult to see how some of the excerpts will do anything but mislead the young student, who knows nothing of the tenor of the works from which they are taken. It is question whether it might not have been pedagogically wiser to have given fewer but more adequate selections. Never-

theless, the large number of short selections does give a distinctive value to the work. There can be no doubt that particularly certain of the chapters of the work, offer a useful bibliographical introduction to the subject under consideration in the chapter. The "samples" provided may serve as a guide and stimulus to further reading. It is also possible that the volume will prove of value ot those students whose work is handicapped by very inadequate library facilities.

LEONARD CARMICHAEL

Brown University

McDOUGALL, WILLIAM. *Outline of Abnormal Psychology.* N. Y.: Scribner, 1926. Pp. xiii + 572.

The author regards this and his *Outline of Psychology* (1924) as essentially two parts of one book. He definitely restricts the term "abnormal psychology" to a "psychology of functional disorders," and refuses to recognize any clear line of distinction between neuroses, psychoneuroses and psychoses (p. 28). The book is, in fact, an application to functional disorders, of the main hormic concepts enunciated in the author's *Social Psychology,* the key to which is of predominant importance in all behavior of "Self Regard" manifesting in the individual as either Self-Assertion (Aggression) or "Submission."

Chapter I treats briefly of the schools of abnormal psychology, and although he has already hailed Freud (Preface, viii) as the one who, he believes "has done more for the advancement of psychology than any student since Aristotle," McDougall prefers "the school of integral psychology" represented in America chiefly by Morton Prince and in England by W. H. R. Rivers.

The next few chapters consider the nature of functional disorders in general (the author's address in 1921 before the American Psychiatric Association), fatigue, drugs, sleep, hypnosis and suggestion. Fear is discussed as the psychogenetic factor in Graves' disease. *Neurokyme* is adopted as the best term for neurological discussions, by which to refer to the liberated energy working within the nervous system—a sort of nonsexual *libido, elan vital,* or hormé as first suggested by the author. There is a rather lengthy criticism of Freud's and Janet's theories of suggestion.

Chapter VII, On Dreaming, is entertainingly illustrated by several of McDougall's own dreams at the time he was being

psychoanalyzed by Jung. This is followed by an attack upon Freud's theory of dreaming, because of its emphasis upon pansexuality—which, however, the author notes with satisfaction, Freud is himself in process of correcting. Jung's theory is recognized as being less encumbered by the pleasure principle of hedonistic psychology, and as recognizing the nutritive instinct as well as the sexual.

Chapters X to XIV treat successively of day dreaming; conflict, repression and the complex; dissociation; automatisms; and vague fears and anxieties. This section is replete with case histories from the author's own records acquired during years of service in the late war, when he treated many cases successfully by means of hypnosis, suggestion and a modified psychoanalysis. The material is presented with unusual clarity and freedom from controversy.

Several chapters follow on symbolization and symbolic symptoms; regression; tics and stereotyped movements; compulsions and obsessions and perversions of the sex impulse. Throughout, "aggression" and "submission" and disturbances in the balance between them are employed to explain the many interesting cases presented as illustrative of more or less widely distributed conditions of abnormal psychology. A rather strange assertion made is, that while there is an innate direction of sex impulse toward the opposite sex, nevertheless homosexual experiences are to be considered as something to which all normal men are liable, "not in virtue of a special component of the instinct, but because the physical differentiation of the sexes in the human species is relatively slight." (See footnote to "Pistol Dream," p. 146, also pp. 322–4.)

Chapters XX to XXIV consider delusions; hallucinations; exaltation and depression; schizophrenia and epileptoid seizures. The author believes that paranoia is not so much an incurable disease, but rather essentially a functional or psychogenic disorder—a delusion "which, in the absence of other forms of disorder, attains a high degree of systematization." Here he takes issue with Kraepelin to agree with Bleuler, whom he regards as "probably the best psychologist among contemporary psychiatrists." (P. 210.)

After pointing out that the true opposite of depression is exaltation rather than excitement, and that "the degree of excitement expresses the quantity of free energy, neurokyme, or *libido* in the brain (!?) at the moment" (p. 352), McDougall proceeds to a discussion of theories of manic-depressive insanity. At this point he unexpectedly raises the interesting question of the existence of specific

hormones for specific instincts (p. 358). Anger in mania, fear in depression and the manic output of energy lead to the conclusion that all instincts draw upon a common source of energy. Temperment is defined as "the sum of the bodily influences—especially the chemical influences, upon the course of mental life." (P. 386.) Kretschmer is quoted frequently in reference to psychiatry. One wishes, however, that Gross had been mentioned and something said of *Die Zerebrale Sekundärfunktion*. The possibility of an "introverting hormone" in the blood is also considered most interestingly.

Chapters XXV to XXIX are studies in Freud's views on mental disorders; Freud's therapy; Adler's theory of the neuroses; psychological types and relations to the disorder processes and psychotherapeutic methods and mental hygiene. The Œdipus complex is particularly distasteful to the author and he rejoices over "Freud's revocation of this dogma, and the promulgation of his new doctrine—that in normal persons the Œdipus complex dies a natural death in childhood." He adds, however, "perhaps it is misleading to speak of its death as 'natural'; for according to the new doctrine, its destruction in the male infant is effected by the threat of castration. The parent therefore still has a Roman task to perform; and the most important duty of a father towards his little son is to threaten to castrate him." (P. 421.)

The Freudian concept of the ambivalence of love and hate, is matched by McDougall with that of "self assertion" and "submission." While he finds Adler difficult to comprehend, he recognizes his contribution to be the "inferiority complex," but regrets that he too fails to recognize "the two fundamental instinctive tendencies which I have called 'self assertion' and 'submission' and have described as the main roots of the sentiment of self regard." He complains that Adler confuses them as masculine protest or desire for power, and feminine attitude or passivism, and that to Freud they are Sadism and Masochism.

When he comes to consider psychological types, he makes the interesting observation that Kretschmer's Cycloids and Schizoids, are respectively special varieties of Jung's introverts and extroverts. Jung's types are of temperment, so also are Kretschmer's, but the latter have in addition a peculiar character formation; a fault of character development that renders the one group (Cycloids) liable to manic-depressive disorder rather than hysteria, and the other group (Schizoids) liable to schizophrenia rather than to neurasthenia or

psychasthenia. McDougall considers the types and their reactions very carefully in the light of his researches upon the effect of alcohol and the alkaloids on the animal organism and concludes that " in short, each subject's position in the intro-extrovert scale is mainly determined by some chemical influence of the nature of a hormone or endocrine secretion, or some complex chemical resultant of the general metabolism."

In the discussion of psychotherapeutic methods and mental hygiene, a sane eclecticism prevails and there is considered the value to the patient of abreaction, presence of the physician, suggestion, hypnosis and hypnoidal states, psychological *rapport,* readjustment (by any means ranging from change in environment or reëducation to post-hypnotic suggestion), sublimination (in which the work of Jung is recognized as superior to that Freud), mental hygiene and katharsis.

At length on pages 480–1 the *confessio fides* appears. " I am sure that many of my readers will wish at this point to put to me a plain question and have a plain answer, Yes or No; namely the question—Do you beleive in psychoanalysis? The demand for a plain answer to this question expresses that desire for clear cut classifications and distinct labels which in another sphere demands that the villian and the hero shall be depicted in colors that permit of no confusion. I am neither villian nor hero, and cannot plainly label myself." After pointing out many issues in which he is in agreement with Freud and and equal number in which he is in disagreement, he concludes: " Therefore I am not a Freudian; and if by ' psychoanalysis ' is meant the whole system of Freudian psychology, I do not believe in psychoanalysis."

Chapters XXX to XXXII consider alternating personalities, (a) with reciprocal amnesia, (b) when one is inclusive; (c) when the personalities are co-conscious; and lastly, Trance Personalities. There are rather brief discussions of the famous B C A, the Doris Fischer, and other cases studied by Morton Prince, followed by a sketchy presentation of Flournoy's " Helene." These studies are prefaced with the warning that " when we set out to study the abnormal, it is a little absurd to shy away from its extremer manifestations. . . . Those who dislike problems and prefer to deal only in simple and familiar conceptions should go over frankly to the camp of the behaviorists, where they may cease from troubling and may find in dogmatic slumbers the peace and rest they desire." (P. 491).

Chapters XXXIII and XXXIV are concerned with the theory of

personality and of its disintegration, and of integration and disintegration from the point of view of consciousness. Of the various theories afloat, there are to be noted (1) Dualistic, (2) Monistic, which latter may be either (a) Dualistic Interactionism, (b) Physical Monism, (c) Psychical Monism, and finally, psychophysical parallelism, in the strict sense of the term, now "generally recognized as the most unsatisfactory of all the formulations." "To-day the rise of the Quantum theory in physics and the *Gestalt* or Configuration theory in psychology, indicate a movement toward psychical monism and away from physical monism." The main rivals in the field are psychical monism and dualistic interactionism. The prime solvent of the difficulty appears to be the theory of character, of the integration of personality sketched in greater detail in the author's *Social Psychology* and toward which Janet now seems "to be making some little advance." There must be recognized the importance of "integration"—a hierarchy of sentiments of which the chief is the Ego, Consciousness of Self, or Self Regard.

It is unfortunate that in speaking of the importance of the McDougallian theory of integration and after stating that "Freud has failed to gain any insight into this integrative process," McDougall adds: "Jung has equally overlooked the problem of integration." (P. 534). Now, because one has failed to accept the McDougallian theory of integration, it does not necessarily follow that he has "overlooked the problem of integration." It is somewhat illuminating to turn to Jung's *Psychological Types* (1923) and read the indexed references to Ego, Ego-complex, Ego and Self, Basis of Ego, Development of Ego, Pneuma, and even Soul.

In his final chapter, McDougall urges the Liebnitzian assumption "that a monad is an ultimate realty, a being that is active in its own right, that the normal human personality is essentially a society of such monads, living in harmonious co-operation in virtue of the integration of them all into one system. . . . Complete integration according to this plan gives to the supreme monad control over the whole system. . . . The commander in chief sits in the center where all lines of communication converge. . . . The obvious and I believe inevitable inference from the facts is that I who consciously address you am only one among several selves or Egos which my organism, my person, comprises. . . ."

And finally—"The monadic view of personality I have sketched

has this advantage—it does not commit us to any one metaphysical theory."

It is sincerely hoped that the above review does justice to the book and its author. Frankly it is rather hard to follow through, if one remembers too distinctly as he reads, what the author may have said a few pages back. It is also unfortunately somewhat disjointed even where the chapters were written to follow each other in regular sequence,—to say nothing of the verbatim reprints of speeches delivered from time to time and scattered through the book here and there. As a Series of Studies in Psychogenic Disorders (rather than An Outline of Abnormal Psychology) the book is decidedly interesting and worth while.

HENRY E. STARR

University of Pennsylvania

GRIFFITH, COLEMAN, *The Psychology of Coaching*. N. Y.: Scribner's, 1926. Pp. xii + 208.

Dr. Griffith's most recent contribution to psychoathletic literature presents the psychological aspects of the coach's function in clear and nontechnical form. He believes that the successful coach must combine the qualifications of athlete, physiologist and psychologist.

The psychology of coaching is approached at three levels. In the early chapters some well established principles of habit formation and interference, distribution of learning periods and effective presentation of material are interpreted and presented in a form directly applicable to the problems of the coach. Section headings of particular interest are "The Psychology of Stance," "The Winning Streak," "The Slump," "How to Avoid Staleness," "Overconfidence."

A higher level of analysis is involved in the chapters on "The Jinx and How to Handle It," "The Yellow Streak and How to Conquer It," "Morale," and "Personality and Will Power." The "Jinx" and "The Yellow Streak" are shown to be the result of natural causes and corrective measures are suggested. The author considers the development of "Morale" to be the aim of athletic competition, which provides the medium for the fostering of emotional and intellectual traits which, in a less protected environment, are the outgrowth of military and pioneer hardships. In much the same manner "personality and will power" are the result of habits which may be instilled on the athletic field.

In the final chapter the responsibility of the coach is emphasized in an inspirational vein. The following quotation will indicate the author's thesis. "We may repeat, then, that life does not often present to a man a greater opportunity to be a leader, a teacher, a pal, a friend, and a builder of character, than it does to a coach. Great musicians have their patrons, great teachers their pupils, great leaders have their followers, but great coaches and athletes have their worshipers. To the average high school boy the coach may be the realization of more ideals, the creator of greater hopes, the source of greater disappointments than almost any other individual that will come into his life."

As the book is definitely written for the coach and not the psychologist, the reviewer can hardly predict its reception in the athletic world. It is safe to state, however, that if all coaches embodied the characteristics portrayed in its pages there would be much less criticism of athletic trends than exists at the present time.

KARL G. MILLER

University of Pennsylvania

HEADLEY, LEAL A., *How to Study in College*. N. Y.: Holt, 1926. Pp. 417.

The book contains chapters which give suggestions on how to keep fit physically, keep fit mentally, concentrate, understand, learn, remember, judge, reason, read, use the library, make notes, meet an examination, and how to invest time. The suggestions under the various topics, as stated in the author's preface, "are the outgrowth of a somewhat extensive attempt to help the college freshman organize his intellectual life and have been worked out in connection with a course in *How to Study* which has been given throughout seven consecutive years." The general background upon which the suggestions given are based can, in a general way, be characterized further by the references made to authorities. These references are 73 in number. The authors referred to 5 or more times in the 73 references are as follows: James 13, Meuman 11, Dewey 8, Darwin 6, Judd 6, Starch 6, and Watt 5 times. These seven authors make up 75 per cent of the references. Exercises are given in the form of exercises and questions at the close of each chapter in order to help the student form habits of putting the suggestions on how to study into practice. Many cross-references are made to indicate just how the topics treated in the various chapters are related.

The value of the book as a text in a course for college freshmen on how to study will depend upon the extent to which the instructor will utilize the exercises at the close of each chapter and give additional practice in actually applying the suggestions on how to study in *all* the courses the student is pursuing at the time. Such use was probably the author's purpose in writing the book, as is evidenced by the type of exercises and the cross-references. For such use the book is highly commendable, and is a real contribution in the general field of helping the college freshman—a problem that, at the present time, is being attacked from several points of view. The average college student will, however, probably get little help from the book alone. It is so voluminous that without direction he will probably not be able to relate the many suggestions on how to study in such a manner as to even understand and know how to study, let alone form good habits of study in his courses. In order to study the book effectively without direction and actually carry its suggestions into practice, the student would have to be able to do just what the outcomes of the study of the book should be. This is not an adverse criticism of the work. It is simply another way of pointing out its value as a text in a course on how to study. It is not written with the idea of self-teaching. It leaves room for teaching, and for additional things for the student to do, which for the average student must be wisely directed and practiced until they become habits of study.

W. J. SAUPE

University of Missouri

JAENSCH, WALTHER, *Grundzüge einer Physiologie und Klinik der psychophysischen Persönlichkeit*. Berlin: Springer, 1926. Pp. 483.

This copious monograph has an interesting origin and is a significant expression of the psychobiological trend which in Germany in particular is bringing related sciences into closer combination. The author is a physician conducting investigations at the university clinic of Frankfort-am-Main, the junior brother of Prof. E. R. Jaensch of the Marburg Institute of Psychology and a former student of Prof. Dr. Med. G. von Bergmann.

Through the former, the author became interested in experimental psychology and eidetic research. Through the latter he became

familiar with the method of capillary microscopy and the study of individual deviations by vegetative stigmata.

The present monograph pursues both of these lines of approach and converges them upon a study of biotypes among relatively normal children. The volume bears the subtitle: *A Contribution to Functional Diagnosis.* With extraordinary success it brings into interpretive relations psychological, biological, physiological, and clinical concepts. The exposition is not a mere coördination through juxtaposition of data from different fields, but a fruitful correlation. For this reason the volume is of highly suggestive and even fundamental value.

The author makes a consistent and clear cut separation of substantive data and of theoretical discussion. The basic data are presented in Section Two, which comprises an entire half of the volume, and is devoted to a report of observational, clinical, and experimental studies of the two major biotypes of the psychophysical personality. These types were systematically investigated in both pathological and normal individuals but chiefly in relatively normal school children of preadolescent age. The characteristics of both "pure" and mixed types were determined in relation to galvanic and mechanical irritability in sensory and motor fields: physiognomical and mimetic features, with special reference to the eye; pulse and circulation; dermal and other physical stigmata; and finally, optical or eidetic phenomena.

The eidetic characteristics were studied in great detail and confirmed in a control study to establish that the Anschauungsbilder (AB) were actually seen and reliably reported by the subjects. Jaensch believes that the eidetic phenomena constitute a very consistent and delicate index of underlying personality, that they are really more significant than constitutional differences expressed in statural and more obvious morphological stigmata. The consistency of the eidetic criteria was of some surprise even to the author, who concludes that the Optische Untersuchungs-methoden and related psychoclinical methods will make possible a fundamental kind of tunctional diagnosis, of importance both to medicine and to differential anthropology.

Although the monograph is devoted largely to a comparative study of the T-type and B-type of personality, the author does not exclude the possibility of other types and holds that intermediate or mixed types prevail. He insists, however, that the T-complex and the

B-complex rest on biological determinations; that they are fundamental categories of great heuristic value which will elucidate human differences of personality in both normal and abnormal individuals.

The characteristics of the T-Typus (AB_T) and B-Typus (AB_B) may be listed in summary contrast as follows:

General personality make-up: T: reserved, morose, anxious, restrained, serious; B: frank, lively, alert, generally goodnatured, but often of variable mood and associated with artistic tendency. *Nature of imagery:* T: fixed, and if noneidetic, very frequently avisual; B: fluctuating, and if noneidetic, definitely visual. *Nachbilder:* T: persistence prolonged, intensity increased; B: occasionally ordinary physiological NB, sometimes comparatively slight increase in intensity. *Voluntary modification of Abbilder:* T: often impossible, and when present frequently accompanied by effort; B: always possible, with ease and speed. *Spontaneous modification of Abbilder:* T: very seldom; B: meaningful and other variations common. *Voluntary re-presentation:* T: usually impossible; B: always possible and prompt. *Voluntary obliterations:* T: often impossible, image persisting even when thought is otherwise directed; B: prompt disappearance when thought is otherwise directed. *Spontaneous appearance:* T: if at all present, usually strange, obtrusive and depressive in its effect, and unrelated to the current flow of ideas; B: experienced as natural and appropriate to the subject's mental life and depressive only when the primary affective condition so determines. *Color:* T: rarely like the original and then only in the E-phase; B: nearly always like the original even beyond the E-phase. *Definition:* T: sometimes slight; B: always pronounced. *Duration:* T: limited but unaffected by volition and ideation; B: essentially unlimited and entirely dependent on volition and ideation. *Subjective reaction to manifestation of Abbilder:* T: sometimes annoyed or perplexed as though the phenomenon were a strange visitation to be concealed; B: taken for granted as an altogether natural expression of mental life and therefore neither regarded nor reported as in any way strange. *Reaction to calcium:* T: positive, with a few special exceptions; B: consistently negative. *Reaction to psychic influence:* T: lacking or almost lacking; B: positive and vigorous.

The above summary, although incomplete, suggests the diversity of method and detail with which the two major biotypes and their variants were investigated. Clinical protocols give further evidence of the wealth of observation on which the data rest. Photographs,

chiefly of children, bring into comparison the " Tetaniengesicht " and the contrasting features and expression of the Basedow type. These photographs are supplemented by portraits of the famous physiologist Joh. Müller, and of Goethe, who are described in some detail as marked embodiments respectively of the T and the B type of personality. Wundt supplies a description of Müller's physiognomy:

" Johannes Müller war klein von Statur, aber dabei eine durch sein ausdrucksvolles Gesicht imponierende Persönlichkeit, ein düsterer Ernst war ihm auf die Stirne geprägt, und der Eindruck der schwermütigen Falten dieser Stirn wurde durch die nie rastenden, zuckenden Bewegungen seines Angesichts noch verstärkt."

Of Goethe it was written:

" So männlich schöne Gesichtszüge, die so deutlich das Gepräge der Elevation, der Energie und der Genialität tragen oder ein solches Feuer, wie es aus seinen grossen schwarzbraunen Augen blitzt, vermag man sich nicht vorzustellen."

In the third and concluding section of his monograph the author enters upon theoretical, even speculative, ground, but he anchors his discussion concretely to genuine clinical problems. He briefly reviews the underlying principles of E. R. Jaensch's experimental-structural psychology and opposes it sharply to the Gestalt psychology.

" Für das Bestehen einer ' konzentrischen Schichtenstruktur ' des psychophysischen Organismus sprechen mithin nicht nur beim Menschen vorliegende schon in vivo feststellbare Verhältnisse, sondern ebensowohl ontogenetische wie phylogenetische Sachverhalte. Wir müssen uns im Sinne der Forschungsergebnisse E. R. Jaenschs und seines Arbeitskreises bei dieser ' konzentrischen Schichtenstruktur ' nur genegwärtig halten, dess in den entwicklungsgeschichtilich höher stehenden vegetativsomatischen Schichten der Persönlichkeit die zugehörigen psychischen Vorgänge in steigendem Masse ' Invarianz ' und Eigenleben gewinnen, d.h. also, dass sie von exogenen und endogenen Reizen immer unabhängiger werden und darum mit steigender Entwicklung auch eine abnehmende ' psychophysische Integration ' (Durchdringung mit den somatischen Funktionen) zeigen; hierüber später noch Näheres."

In this connection the author critically discusses the developmental neurology and the physiology of the vegetative nervous system, and correlates the T and B complexes with a subcortical and a cortical reaction type. In this direction he looks for the biological significance of the psychological and the medical characteristics of his two

basic biotypes. The scope of the discussion is reflected in the capacious sectional title: "Einige Grundlinien zu einer anthropologischen, medizinisch-physiologischen und klinisch-pathologischen Biologie."

The sweep of the author's net includes the differential histology of the capillary system in relation to deviations in the concentric stratification of the psychophysical personality; mental deficiency, particularly cretinism; tetany; hyperthyroidism; central, peripheral, compensated and decompensated neuroses; hysteria; hallucination; sleep; and dementia precox (Schizophrenia) which is interpreted as a retrogressive lysophrenia of the psychophysical personality (S-Typus). Kretschmer's work on constitutional types is considered important, but Jaensch believes that in the formulations of functional complexes like his own eidetic types, lie at once the most incisive and fundamental criteria of human differences. Likewise he believes that the rôle of endocrine constellations is coarse and secondary in comparison with the early genetic factors which underlie these criteria.

In spite of the range of subjects treated and the abundant footnote references to varied fields, the monograph is in no sense eclectic. It is interpretational and points to rich fields of future collaboration between psychologists, biologists, psychiatrists. Large domains of psychology must inevitably become identified with physiology and experimental, clinical medicine. This book reflects the broad path toward such new orientations.

But if the laboratory psychologist wishes he may content himself with the first empiric half of the monograph which the author concludes in the following words:

"Die Voranstellung dieses Kapitels vor den nun folgenden Abschnitt geschah mehr oder weniger aus Gründen, die in der Entstehung der vorliegenden Arbeit selbst ihre Ursache besitzen: manches wird erst in dem nachfolgenden Kapitel seine tiefere biologische Durchleuchtung erfahren, die unsre oben geäusserten und schon früher gehegten Vermutungen rechtfertigt, Auffassungen, zu denen wir aber—wiederum empirisch—erst durch die Ergänzung unsrer Methodik durch die Capillarmikroskopie und weitere Untersuchungen und Studien beim Überblick über unser gesamtes Untersuchungsmaterial und am Ende unsres Weges gelangten. Wenn wir also im folgenden eine Theorie und Biologie des T- und B-Typus herauszustellen suchen werden und hierdurch zu einer Biologie der menschlichen Persönlichkeit gelangen, die auch bereits ins rassenkundliche Gebiet hinüberleitet, so wird trotzdem immer erkennbar

sein, wieweit wir hierzu durch weitere empirische Untersuchungen und Versuche gelangten, und was an folgendem rein theoretische Erörterung darstellt. Gleichzeitig werden hierdurch Wege sichtbar werden, auf denen wir voraussichtlich einmal zu einer Uberwindung der heute in der Medizin noch fast völlig alleinherrschenden Symptomatologie gelangen werden, ebenso zu einer völligen Verschiebung des therapeutischen Schwergewichts in das Gebiet der Individual— und Rassenprophylaxe, und es scheint, als ob sowohl in der inneren Medizin wie in der Psychiatrie ein neuer therapeutischer Optimismus hieraus einige Berechtigung ziehen könnte."

The temper as well as the content of Dr. Jaensch's contribution will gain attention. The Rockefeller Foundation has rendered a service in assisting toward the publication of this monograph.

ARNOLD GESELL

Yale Psycho-Clinic

GOODENOUGH, FLORENCE L., *Measurement of Intelligence by Drawings*. Yonkers-on-Hudson: World Book, 1926. Pp. xiv+177.

Clinical psychology has sought, and still seeks, to reduce units of performance to more nearly fundamental processes. It has met with notable success in the interpretation of human behavior in terms of specific abilities, measurable through the ingenious development of the various formboards and other manual apparatus. And the Binet-Simon tests have incorporated certain restricted manual performances in an attempted analysis of intellectual achievement.

It is not to be hoped that any one single test will solve the problem of probing the "totale" of the individual's abilities. Rather is the solution to be found in a comprehensive battery of tests, each aiming at a specific analysis of a specific ability and as part of such battery is to be considered as a valuable contribution the Goodenough Intelligence Test. The simplicity of the test is indicated by the following, the entire instructions to the examinee:

"On these papers I want you to make a picture of a man. Make the very best picture that you can. Take your time and work very carefully. I want to see whether the boys and girls in —— school can do as well as those in other schools. Try very hard and see what good pictures you can make."

The test utilizes only the child's single drawing of a man, and the nonverbal nature of the test makes it particularly suitable for studying the mentality of children from foreign homes, and deaf children.

That there is diagnostic value in such an elemental test is borne out by a study of the literature of the "early investigators," who "were able to show rather conclusively that the drawings made by young children have an intellectual rather than an esthetic origin. They are determined by concept development rather than by visual imagery or by manual skill." And further it is proved that a child draws what he knows rather than what he sees.

Paulsson early contended that "drawing, to the child, is primarily a language, a form of expression, rather than a means of creating beauty." And that in drawings there can be traced the beginnings of analysis, of differentiation and comparison.

The facility with which the test can be given and scored recommends it as a group test adequate for gross classification. Cyril Burt maintains that if there is evident enough lack of coherence, "zusammenhangenlosigkeit," in most instances one can make a differentiation between normal and backward children. Dr. Goodenough goes further and suggests "that drawings if rightly understood would help to throw light upon the causes of mental disorders and be of material aid in diagnosis."

Dr. Goodenough has struck at a basic concept. She has, we believe, made a valuable and scholarly contribution to the field of intelligence measurement. As a group test, fully cognizant of the limitations of all group tests, it is to be highly recommended or when utilized in an individual examination its adequate analysis makes it a valuable adjunct to any battery of mental tests and measurement materials.

YALE S. NATHANSON

University of Pennsylvania

ROBBINS, SAMUEL D., *Stammering and Its Treatment.* N. Y.: Stechert, 1926. Pp. 121.

Director Robbins has been doing experiments in the Harvard psychological laboratory on the middle finger of stammerers and on the brain of one trephined stammerer, showing that too much blood gets to the head before the tongue trips, and that this is due to fear. This book tells stammerers about those experiments; where their fear comes from and how to get rid of it; all the trade secrets; all they can get from any correspondence course, and more. Relaxation, concentration, habit, autosuggestion, self-confidence, control of the rate of thinking, are some of the topics treated in simple language, to

produce the proper state of mind for a cure. Then come directions for attention training, vowel and consonant formation, tongue relaxation, breath control, and practice exercises. There is also something about children's stammering; how it comes from imitation or from lack of words; how it sometimes cures itself, and sometimes doesn't, and how it can be quickly stopped without the child knowing anything about it. The author's first child began to stammer violently at the age of two years and three months, and was cured in less than a month. The second child began to stammer at the same age and was left to outgrow it, and took a full year to regain control of his words. The book adds one to the list of commercial organizations under psychological control, and will help those who suffer from stammering, or come in contact with it in home, school, or elsewhere. It is the first American textbook on stammering correction, for high school age and over, in more than a dozen years.

CHARLES B. BLISS

Shoreham, Vermont

VALENTINE, P. F., *The Psychology of Personality*. N. Y.: Appleton, 1927. Pp. 393.

Presenting the divergent viewpoints of the "structural" and "functional" schools of "Psychological Investigation," foundation is laid for a two-fold definition of Personality. The Subjective Personality, identified with the "Self" as such, is the product of the Introspectionists. The Projective Personality is the material of the "Behaviorists." The Variable Personality, constantly contributed to by the environments the "determining factor" of which is a "social one," is nevertheless a unit. Although, "Changing" it is nevertheless "unified." No "line" marks off the "subjective from the objective aspect." Such is the background upon which the author proceeds to employ the divergent and at times conflicting viewpoints of many writers in his attempt to clear a persistent confusion of terms. The *dynamic* of Personality is maintained far beyond interpretation of either of the accepted viewpoints.

Save for the choice of a rather clearly defined term, "habit" as the "Key of Personality," and the resulting necessity of burdening this work "with all man's acquired reactions, intellectual, motor, and affectivite—and their manifold integrations and changing patterns," few changes are to be noted from the original presentations of other authors.

Complexity of Personality is revealed in the "distribution of traits" and emphasized in the dynamic back-grounds of instincts and feeling. The classification of Personality includes the entire gamut of morphological, bio-chemical, and psychological terminology. The author completes the remaining half of his work in terms of the psychological with full consideration given to both the "conscious" and "unconscious."

The "Measurement of Personality" finds the author lacking in sympathy with those who have attempted to meet the problem by laying hold upon the most specific determinable factors immediately at hand. Almost the entire work within the last five years remains unnoted for consideration and reference.

Fierce in his criticism of those who have "talked" about Personality and left nothing of a specific help for practical use, the author again notes certain physical, mental, social, and psychological rules of thumb which are left to us with almost the same characteristic lack of appreciation of the individual problem.

R. A. BROTEMARKLE

University of Pennsylvania

BOOKS RECEIVED

SEASHORE, CARL E., *Learning and Living in College.* Univ. of Iowa Stud., 1927. First Series No. 126. Pp. 124.

MALINOWSKI, BRONISLAW, *Sex and Repression in Savage Society.* N. Y.: Harcourt Brace, 1927. Pp. xiv+285.

POFFENBERGER, A. T., *Applied Psychology: Its Principles and Methods.* N. Y.: Appleton, 1927. Pp. xx+586.

WEBSTER, RALPH W. *Potassium and Tartrates. A Review of the Literature on Their Physiological Effects.* Chicago: Commonwealth, 1927. Pp. 168.

OPPENHEIMER, FRANCIS J. *The New Tyranny.* N. Y.: A. & C. Boni, 1927. Pp. 561.

ARONSON, MOSES JUDAH, *La Philosophie Morale de Josiah Royce.* Paris: Alcan, 1927. Pp. xi+185.

GIESE, FRITZ, *Methoden der Wirtschaftspsychologie.* Berlin: Urban & Schwarzenberg, 1927. Pp. 121–744.

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BERTRAND-BARRAUD, DANIEL, *De la Nature Affective de la Conscience.* Paris: Vrin, 1927. Pp. 155.

WALTHER, ANDREAS, *Soziologie und Sizialwissenschaften in Amerika.* Karlsruhe: Braun, 1927. Pp. 143.

NOTES AND NEWS

A Symposium on Feelings and Emotions will be held at Wittenberg College, Springfield, Ohio, on October 20–23, under the Honorary Chairmanship of Dr. J. McK. Cattell. All members of the American Psychological Association are invited. Others who are interested should communicate with Dr. Martin L. Reymert at Wittenberg College. The following psychologists have indicated their intention to be present and to read papers: Cattell, Langfeld, Cannon, Pillsbury, Jastrow, Seashore, Weiss, Howard, McDougall, Dunlap, Hoisington, Washburn, Bentley, Carr, Prince, Gault, Brett, Koffka and Woodworth. The following do not expect to be present but have submitted papers to be read at the meetings: Stratton, Hollingworth, Pieron, Janet, Katz, Stern, Joergensen, Gruen, Kiesow, Aveling, Krueger, Spearman, Claparede, Adler, Bechterew and Buehler.

THE psychological laboratory at Wesleyan University has moved into larger quarters, now occupying a floor and a half of Judd Hall. Dr. Carney Landis has been made Acting Chairman of the department and Mr. T. A. Langlie, formerly of the University of Minnesota, has been appointed as an instructor.

DR. JOSEPH JASTROW, formerly professor of psychology in the University of Wisconsin, will give a series of lectures this autumn on "The Psychology of the Emotions," under the joint auspices of the New School of Social Research and the Child Study Association of America.

DR. HAROLD E. JONES, assistant professor of psychology at Columbia University, has been appointed director of research at the newly-created Institute of Child Welfare, of the University of California.

DR. L. L. THURSTONE, of the University of Chicago, has been promoted to a full professorship in psychology.

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Psychological Review—Princeton, N. J.: Psychological Review Company. Subscription $5.00. 480 pages annually. Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.

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Psychological Monographs—Princeton, N. J.: Psychological Review Company. Subscription $6.00 per vol. 500 pp. Founded 1895. Edited by Raymond Dodge. Published without fixed dates, each issue one or more researches.

Psychological Index—Princeton, N. J.: Psychological Review Company. Subscription $2.00. 200 pp. Founded 1895. Edited by W. S. Hunter. An annual bibliography of psychological literature.

Journal of Philosophy—New York; 515 W. 116th St. Subscription $4. 728 pages per volume. Founded 1904. Bi-weekly. Edited by F. J. E. Woodbridge, Wendell T. Bush and H. W. Schneider.

Archives of Psychology—Sub-Station 84, N. Y.: Archives of Psychology. Subscription $5. 500 pp. ann. Founded 1906. Ed. by R. S. Woodworth. Published without fixed dates, each number a single experimental study.

Journal of Abnormal and Social Psychology—Albany, N. Y. Subscription $5; foreign $5.25. Boyd Printing Company. Ed. by Morton Prince. Quarterly. 432 pages ann. Founded 1906. Abnormal and social.

Psychological Clinic—Philadelphia: Psychological Clinic Press. Subscription $2.50. 288 pages. Ed. by Lightner Witmer. Founded 1907. Without fixed dates (9 numbers). Orthogenics, psychology, hygiene.

Training School Bulletin—Vineland, N. J.: The Training School. Subscription $1. 160 pp. ann. Ed. by E. R. Johnstone. Founded 1904. Monthly (10 numbers). Psychology and training of defectives.

Comparative Psychology Monographs—Baltimore: Williams & Wilkins Co. Subscription $5. 500 pages per volume. Edited by W. S. Hunter. Published without fixed dates, each number a single research.

Psychoanalytic Review—Washington, D. C.: 3617 10th St., N. W. Subscription $6. 500 pages annually Psychoanalysis. Quarterly. Founded 1913. Ed. by W. A. White and S. E. Jelliffe.

Journal of Experimental Psychology—Princeton, N. J. Psychological Review Company. 480 pages annually. Experimental. Subscription $5.00. Founded 1916. Bi-monthly. Ed. by Madison Bentley.

Journal of Applied Psychology—Bloomington, Ind.; Indiana University Press. Subscription $5. 400 pages annually. Founded 1917. Quarterly. Edited by James P. Porter and William F. Book.

Journal of Comparative Psychology—Baltimore: Williams & Wilkins Co. Subscription $5. 500 pages annually. Founded 1921. Bi-monthly. Edited by Knight Dunlap and Robert M. Yerkes.

Genetic Psychology Monographs—Worcester, Mass. Clark University. Subscription $7. 600 pages ann. Ed. by Carl Murchison. Bi-monthly. Each number a complete research. Child behavior, differential and genetic psychology. Founded 1925.

Psychological Abstracts—Eno Hall, Princeton, N. J. Edited by W. S. Hunter. Subscription $6.00. Monthly. 600 pages annually. Founded 1927.

Archives of Psychoanalysis—New York: 2 East 65th St. Subscription $20.00. 1000 pages ann. Ed. by L. Pierce Clark. Quarterly. Detailed analyses of cases of narcistic neuroses and psychoses showing psychoanalytic technic. Foreign abstracts and translations.